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IN REPLY REFER TO

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From: Chief of Naval Operations (N889H)
To: Commander, Naval Air Systems Command (PMA205-2D)
Subj: REQUEST FOR APPROVAL OF PROPOSED NAVY TRAINING SYSTEMS
PLAN (NTSP) FOR THE NAVY CONSOLIDATED SONOBUOYS N88-
NTSP-A-50-9910C/A

Ref: (a) COMNAVAIRSYSCOM ltr 1500 Ser PMA205-BA2/0500109

Encl:(1 NTSP dated May 2000

1. In reply to reference (a), subject NTSP has been reviewed and is approved for fleet distribution. The NTSP will be distributed via the OPNAV N889H (Naval Aviation Technical Training) web site (<http://www.avtechtra.navy.mil>). If your activity is unable to access the OPNAV web site and download the subject NTSP for review, contact ATCS (AW) Morris at DSN 757-9173, Comm: (301) 757-9173 for assistance.

2. OPNAV point of contact is LCDR M. E. Belcher (N889H1), DSN 664-7714, Comm:(703) 604-7714.

A handwritten signature in black ink, appearing to read "T. M. Vandenberg".

T. M. VANDENBERG
Captain, U.S. Navy
Head, Aviation Technical Training
Section

Copy to:
COMNAVAIRSYSCOM (AIR-3.4.1)

NAVY TRAINING SYSTEM PLAN

FOR THE

NAVY CONSOLIDATED

SONOBUOYS

N88-NTSP-A-50-8910C/A

AUGUST 2000

NAVY CONSOLIDATED SONOBUOYS

EXECUTIVE SUMMARY

This Navy Training System Plan (NTSP) for the Navy Consolidated Sonobuoys addresses the manpower, personnel, and training requirements associated with the AN/SSQ-36, AN/SSQ-53, AN/SSQ-57, AN/SSQ-62, AN/SSQ-77, AN/SSQ-86, AN/SSQ-101, AN/SSQ-110, and AN/SSQ-110A Sonobuoys. These sonobuoys provide both a deployable acoustic signal source and reception capability for underwater signals of interest. The received signals are transmitted to monitoring unit(s) that process the signal for target analysis, classification, and recording on magnetic tape media for replay and post-event analysis. Established sonobuoy tactics allow for short and long range detection of surface ships and submarines, ultimately resulting in the prosecution of identified hostile targets.

All sonobuoys addressed in this NTSP are currently employed by the fleet with the exception of the AN/SSQ-101 Air Deployable Active Receiver (ADAR) Sonobuoy, which successfully achieved Milestone III in March 1999, and began acquisition Phase III (Production, Deployment, and Operational Support). Initial Operating Capability for the ADAR Sonobuoy is scheduled for late Fiscal Year 2001.

Manpower requirements will remain unchanged by introduction of the ADAR Sonobuoy. Existing operators will be used to monitor processed data. Organizational level personnel will load and download the sonobuoy as part of their currently assigned tasking.

Initial training in support of the ADAR Sonobuoy development and operational tests has been completed. A Fleet Introduction Team (FIT) will be established to provide ADAR Sonobuoy training. The FIT will provide on-site familiarization in the form of instruction to operators on the capabilities, tactical applications, unique applications, equipment interface, and proper usage of the ADAR Sonobuoy. In addition, the FIT will demonstrate the proper preset and loading procedures for the sonobuoy to cognizant personnel.

Follow-on operator training currently exists for all addressed sonobuoys with the exception of the ADAR Sonobuoy. ADAR information will be added to all applicable operator courses with no anticipated addition to current course lengths. All subject sonobuoys are expendable and non-repairable. No maintenance actions will be performed at the organizational, intermediate, or depot maintenance levels and, therefore, no requirement exists for follow-on maintenance training.

NAVY CONSOLIDATED SONOBUOYS
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NAVY CONSOLIDATED SONOBUOYS

LIST OF ACRONYMS

ADAR	Air Deployable Active Receiver
AGC	Automatic Gain Control
AO	Aviation Ordnanceman
ASW	Anti-Submarine Warfare
AT	Aviation Electronics Technician
AW	Aviation Warfare Systems Operator
BT	Bathythermograph
CAD	Cartridge Actuated Device
CD-ROM	Compact Disk-Read Only Memory
CFS	Command Function Select
CIN	Course Identification Number
CINCLANTFLT	Commander In Chief Atlantic Fleet
CINCPACFLT	Commander In Chief Pacific Fleet
CNET	Chief of Naval Education and Training
CNO	Chief of Naval Operations
CSO	Constant Shallow Omni
DICASS	Directional Command Activated Sonobuoy System
DIFAR	Directional Frequency Analysis and Recording
DLC	Data Link Communications
DT	Developmental Test
EER	Extended Echo Ranging
EFS	Electronic Function Select
EOD	Explosive Ordnance Disposal
FASOTRAGRULANT	Fleet Aviation Specialized Operational Training Group, Atlantic
FASOTRAGRULANT DET	Fleet Aviation Specialized Operational Training Group, Atlantic Detachment
FASOTRAGRUPAC	Fleet Aviation Specialized Operational Training Group, Pacific
FASOTRAGRUPAC DET	Fleet Aviation Specialized Operational Training Group, Pacific Detachment
FIT	Fleet Introduction Team
FM	Frequency Modulation
FY	Fiscal Year

NAVY CONSOLIDATED SONOBUOYS

LIST OF ACRONYMS

IEER	Improved Extended Echo Ranging
ILSP	Integrated Logistics Support Plan
LOFAR	Low Frequency Analysis and Recording
NA	Not Applicable
NAS	Naval Air Station
NAVAIRSYSCOM	Naval Air Systems Command
NAVPERSCOM	Naval Personnel Command
NAWCAD	Naval Air Warfare Center Aircraft Division
NSWC	Naval Surface Warfare Center
NTSP	Navy Training System Plan
OPNAV	Office of the Chief of Naval Operations
OPO	OPNAV Principal Official
OT	Operational Test
OTS	Over The Side
PEO(A)	Program Executive Office, Air ASW, Assault, and Special Missions Programs
PMA	Program Manager, Air
PQS	Personnel Qualification Standards
RF	Radio Frequency
RFT	Ready For Training
TACCO	Tactical Coordinator
TD	Training Device
TTE	Technical Training Equipment
UHF	Ultra High Frequency
VHF	Very High Frequency
VLAD	Vertical Line Array DIFAR
VX-1	Air Test and Evaluation Squadron One

NAVY CONSOLIDATED SONOBUOYS

PREFACE

This Navy Training System Plan (NTSP) for the Navy Consolidated Sonobuoys has been prepared to update the Draft NTSP for the Navy Consolidated Sonobuoys, A-50-8910C/D, dated October 1999. The following has been incorporated:

- Deleted Common Core Acoustics Analysis Course D/E-050-0100. It has been incorporated into the AW "A" school.
- Added Sonobuoy IETM AE-325CD-SSQ-000.

PART I - TECHNICAL PROGRAM DATA

A. NOMENCLATURE-TITLE-PROGRAM

- 1. **Nomenclature-Title-Acronym.** Navy Consolidated Sonobuoys
- 2. **Program Elements.** 064261N and 060399N

B. SECURITY CLASSIFICATION. This NTSP is Unclassified.

1. Extended Echo Ranging and Improved Extended Echo Ranging Sonobuoys

- a. **System Characteristics**..... Secret
- b. **Capabilities** Confidential
- c. **Functions** Confidential
- d. **Delivery Schedule**..... Confidential

2. All other Sonobuoys addressed in this NTSP

- a. **System Characteristics**..... Unclassified
- b. **Capabilities** Unclassified
- c. **Functions** Unclassified
- d. **Delivery Schedule**..... Confidential

C. MANPOWER, PERSONNEL, AND TRAINING PRINCIPALS

- OPNAV Principal Official (OPO) Program Sponsor..... CNO (N885D)
- OPO Resource Sponsor CNO (N885D)
- Developing Agency..... NAVAIRSYSCOM (PMA264)
- Training Agency CINCLANTFLT
CINCPACFLT
CNET
- Training Support Agency..... NAVAIRSYSCOM (PMA205)
- Manpower and Personnel Mission Sponsor CNO (N12)
NAVPERSCOM (NPC-4, NPC-404)
- Director of Naval Training CNO (N7)

D. SYSTEM DESCRIPTION

1. Operational Uses. The United States Navy maintains a superior global Anti-Submarine Warfare (ASW) capability with the ability to detect, localize, identify, and track potentially hostile submarines. Sonobuoys provide both a deployable acoustical signal source and reception capability for underwater signals of interest. These received signals are transmitted to monitoring units that process the signal for target analysis, classification, and recording on magnetic tape media for replay and post-event analysis. Established sonobuoy tactics allow for short and long range detection of surface ships and submarines resulting in the prosecution of identified hostile targets.

a. Bathythermograph Sonobuoy, AN/SSQ-36. The Bathythermograph (BT) Sonobuoy provides a thermal gradient measurement to the monitoring units.

b. Directional Frequency Analysis and Recording Sonobuoy, AN/SSQ-53D/E. The Directional Frequency Analysis and Recording (DIFAR) Sonobuoy provides a magnetic bearing of the signal of interest to the monitoring units and can be used for search, detection, and classification. With this capability, it is possible to fix the location of a contact with as few as two AN/SSQ-53 Sonobuoys.

c. Low Frequency Analysis and Recording Sonobuoy, AN/SSQ-57B. The Low Frequency Analysis and Recording (LOFAR) Sonobuoy provides omnidirectional passive acoustic signature data to the monitoring unit(s). The sonobuoy is calibrated and can be used to accurately measure ambient noise, and through post-event analysis, provides Sound Pressure Level measurements. With this capability, it is possible to fix the location of a contact with as few as three AN/SSQ-57B Sonobuoys.

d. Directional Command Activated Sonobuoy System Sonobuoy, AN/SSQ-62B/C/D/E. The Directional Command Activated Sonobuoy System (DICASS) Sonobuoy, in conjunction with the monitoring units' signal processing equipment, provides active sonar range, bearing, and Doppler information on a submerged contact. The DICASS Sonobuoy is designed to develop and maintain attack criteria. The DICASS is usually employed in multiple sonobuoy patterns, however, they are designed to permit single buoy attack criteria. The flexibility inherent in the monitoring units' control over the various sonobuoy functions enables optimum sonobuoy employment over a wide range of environmental and target conditions.

e. Vertical Line Array Directional Frequency Analysis and Recording Sonobuoy, AN/SSQ-77B. The Vertical Line Array Directional Frequency Analysis and Recording (VLAD) Sonobuoy is designed to increase the detection of signals of interest in an environment where there is an ever-increasing amount of ambient noise. This increased detection capability is accomplished through the use of beamforming technology. Beamforming provides enhanced reception of desired threat signals of interest while attenuating reception of unwanted noise. This technology gives the monitoring units the ability to search, detect, and classify a target at extended ranges with minimum expenditure of sonobuoys.

f. Data Link Communications Sonobuoy, AN/SSQ-86. The Data Link Communications (DLC) Sonobuoy provides limited, one-way, acoustic communications from the buoy to friendly submarines. The buoy is encoded by the aircrew prior to flight.

g. Air Deployable Active Receiver Sonobuoy, AN/SSQ-101. The Air Deployable Active Receiver (ADAR) Sonobuoy is an acoustic data receiver capable of in-buoy beamforming and transmission of received real-time acoustic signals back to monitoring units. The primary mission is to receive active search signals (i.e., long-range echo detection of quiet, slow moving targets).

h. Extended Echo Ranging Sonobuoy, AN/SSQ-110. The operational uses of the Extended Echo Ranging (EER) Sonobuoy are classified.

i. Improved Extended Echo Ranging Sonobuoy, AN/SSQ-110/A. The operational uses of the Improved Extended Echo Ranging (IEER) Sonobuoy are classified.

2. Foreign Military Sales. Information concerning Foreign Military Sales of sonobuoys may be obtained from the Program Executive Office, Air ASW Assault and Special Missions Programs (PEO(A)), at Naval Air Systems Command (NAVAIRSYSCOM) Program Manager, Air (PMA)264.

E. DEVELOPMENTAL TEST AND OPERATIONAL TEST. The BT, DIFAR, LOFAR, DICASS, VLAD, DLC, EER, and IEER Sonobuoys have all completed Developmental Test (DT) and Operational Test (OT). The ADAR has completed DT for system effectiveness, ASW platform and sonobuoy interoperability, and compliance with logistics and performance specifications. The ADAR DT-I was successfully completed by Air Test and Evaluation Squadron One (VX-1) Patuxent River, Maryland, during Fiscal Year (FY0) 97. The Naval Air Warfare Center Aircraft Division (NAWCAD), Patuxent River, Maryland, successfully completed the ADAR DT-II from first quarter FY98 through fourth quarter FY98 using the S-3B Aircraft (being the only aircraft capable for testing at that time) and acoustic sources used in conjunction with production representative ADAR Sonobuoys. OT-II was conducted by VX-1 beginning in October 1998 and was successfully completed in December 1998.

F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED. The introduction of the ADAR Sonobuoy does not replace any existing Sonobuoy systems.

G. DESCRIPTION OF NEW DEVELOPMENT

1. Functional Description. All sonobuoys addressed in this NTSP are normally launched from standard A-size tubes via pneumatics, free fall, or a Cartridge Actuated Device (CAD). Shipboard personnel may also launch them by hand or Over The Side (OTS). All are powered by either salt water activated magnesium or silver chloride, lithium chemistry, or thermal batteries, and are designed to scuttle at some point after usable or selected life expires.

a. Bathythermograph Sonobuoy. The BT Sonobuoy is an expendable, thermal gradient measurement sonobuoy that operates on one of three or one of 99 Radio Frequency (RF) channels. It consists of a thermistor temperature probe that descends through the bottom of the sonobuoy canister producing a continuous reading of temperature versus depth. The thermistor temperature probe will descend to 1000, 2000, or 2625 feet, depending upon the depth selected. The BT, upon self-activation, deploys a thermistor temperature probe. Throughout the probe's descent, the temperature gradient is converted to an electronic signal that is applied to the buoy's preset carrier frequency. The monitoring platform receives the signal for recording, processing, and analysis.

b. Directional Frequency Analysis and Recording Sonobuoy. The DIFAR Sonobuoy, upon self-activation, operates in a passive mode at the preset life and depth. Upon reception of acoustic signals, the subsurface unit converts the pressure waves into amplified electronic signals and provides a magnetic reference for each signal through utilization of the flux gate compass. These signals are sent to the surface unit via the cable assembly. The surface unit applies these signals to a preset Frequency Modulation (FM) carrier for Very High Frequency (VHF) transmission. The monitoring platform receives the signals for recording, processing, and analysis.

(1) AN/SSQ-53D. The AN/SSQ-53D DIFAR Sonobuoy incorporates the Electronic Function Select (EFS) capability which provides the operator with the capability to electronically select one of the available 99 RF channels, sonobuoy life of one-half, one, two, four, or eight hours, and hydrophone depth of 90, 400, or 1000 feet. The AN/SSQ-53D also has improved suspension, wider sonic response curve, and electronic upgrades compared to previous DIFAR Sonobuoys.

(2) AN/SSQ-53E. The AN/SSQ-53E DIFAR Sonobuoy incorporates Command Function Select (CFS). Through CFS, a suitably equipped ASW aircraft can transmit Ultra High Frequency (UHF) radio commands to the sonobuoy. These commands select VHF operation (on-off), hydrophone reception Constant Shallow Omni (CSO)/Normal, Automatic Gain Control (AGC) operation (on-off), and change RF channel frequency. The CSO is an omnidirectional hydrophone positioned at a depth setting of 45 feet. It is less sensitive than the normal DIFAR hydrophone, but is useful against an evasive submarine. AGC selection provides the operator additional flexibility when operating in a noisy environment. The ability to select VHF operation and change RF channels enhances operations in the littoral environment. Also, the AN/SSQ-53E Sonobuoy includes an additional 200 feet EFS depth setting.

c. Low Frequency Analysis and Recording Sonobuoy. The LOFAR Sonobuoy is an expendable, omnidirectional, passive sonar unit. It consists of an omnidirectional hydrophone that descends through the bottom of the sonobuoy canister to a pre-selected depth. The LOFAR Sonobuoy operates from one of 31 RF channels preset during manufacturing. There is a selectable operating life of one, three, or eight hours and selectable operating depth of 90 or 400 feet. The LOFAR Sonobuoy, upon self-activation, operates in a passive mode at the preset life and depth. Upon reception of acoustic signals, the subsurface unit converts the pressure waves into amplified electronic signals. These signals are then sent to the surface unit where they

are applied to an FM carrier for VHF transmission. The monitoring platform receives the signal for recording, processing, and analysis.

d. Directional Command Activated Sonobuoy System Sonobuoy. The DICASS Sonobuoy is an expendable, active sonar unit. Via an RF UHF downlink, the monitoring unit controls the DICASS Sonobuoy. The DICASS Sonobuoy, upon self-activation, is able to process UHF command signals transmitted by the monitoring unit. This command activated, active sonobuoy provides range, bearing, and Doppler information on active sonar contacts. The monitoring platform is capable of commanding the transducer to deeper depths, activating sonar transmission, including pulse mode and pulse duration changes, and sonobuoy scuttle. Upon receiving a UHF command signal from the monitoring unit and decoding the signal for the proper address codes, the DICASS Sonobuoy emits, as selected, either a continuous wave or FM "ping." The transducer array emits pulses, which are omnidirectional on the horizontal plane and beamformed on the vertical plane. The received signal is amplified and filtered prior to transfer to the compass and multiplexer subassembly where a magnetic bearing reference is provided. This signal is then routed through the cable assembly to the surface unit where it is applied to an FM carrier for VHF transmission. The monitoring platform receives the signal for recording, processing, and analysis.

(1) AN/SSQ-62B. The AN/SSQ-62B DICASS Sonobuoy may be command activated to change depth, to activate sonar transmissions, and to scuttle the sonobuoy. The AN/SSQ-62B DICASS Sonobuoy operates on one of four preset sonar channels and one of 31 preset RF channels. These channels are preset by the manufacturer and cannot be changed. Upon deployment, the AN/SSQ-62B DICASS Sonobuoy will initially deploy to a depth of 90 feet. Upon receipt of a command signal, the transducer will deploy to a depth of 400 or 1500 feet.

(2) AN/SSQ-62C. The AN/SSQ-62C DICASS Sonobuoy also operates on one of 86 preset sonar channels. The channels are preset prior to flight to one of 86 preset RF channels that correspond with the preset sonar channel. Upon deployment, the AN/SSQ-62C DICASS Sonobuoy will initially deploy to a depth of 90 feet. Upon receipt of a command signal, the transducer will deploy to a depth of 400, 1500, or 2500 feet. The 1500 or 2500 foot depth option must be selected through the EFS during preflight.

(3) AN/SSQ-62D. The AN/SSQ-62D DICASS Sonobuoy has been improved with the replacement of the lithium chemistry battery with a thermal battery. Additionally, the sonobuoy includes the EFS option of selectable depth families. During preflight, either a shallow or deep family of depth option is selected. If the shallow family is selected, depth settings of 50, 150, or 300 feet are available. If the deep family is selected, depth settings of 90, 400, and 1500 are available. These depth options provide sufficient flexibility for both littoral and open ocean ASW operations.

(4) AN/SSQ-62E. The AN/SSQ-62E DICASS Sonobuoy includes the following improvements and modifications to the AN/SSQ-62D DICASS Sonobuoy design. It incorporates CFS, allowing a suitably equipped ASW aircraft to transmit UHF radio commands to the sonobuoy. These commands select VHF operation (on-off), change RF channel frequency

and associated sonar channel frequency, change sonar frequency independently, and change depth setting. These features all provide enhancements for both deep water and littoral ASW environments. Additionally, the AN/SSQ-62E DICASS Sonobuoy includes all four available sonar channel frequencies into a single sonobuoy which provides significant logistics savings.

e. Vertical Line Array Directional Frequency Analysis and Recording

Sonobuoy. The VLAD Sonobuoy is an expendable, omnidirectional, passive sonar unit. The VLAD Sonobuoy uses a multi-element, omnidirectional hydrophone array and a beamforming filter assembly to enhance acoustic sensitivity. The VLAD has a selectable configuration incorporated into the EFS. This allows the operator to select either bottom bounce or convergence zone sound reception. The EFS will also allow selection of one of 99 RF channels, two operating depths of 500 and 1000 feet, and selectable life settings of one, four, or eight hours. In all other respects, the VLAD is comparable to the DIFAR. The VLAD Sonobuoy, upon self-activation, operates in a passive mode for the preset life, depth, and sound reception pattern. Upon reception of acoustic signals, the subsurface unit converts the pressure waves to amplified electronic signals. These signals are then transferred to the beamforming assembly where the signal is amplified and filtered and a magnetic bearing reference is applied. The amplified signal is then routed through the cable assembly to the surface unit and applied to an FM carrier for VHF transmission. The monitoring platform receives the signal for recording, processing, and analysis.

f. Data Link Communications Sonobuoy.

The DLC Sonobuoy is an expendable, acoustic communication device designed to transmit a preprogrammed message to a submerged submarine. It consists of an omnidirectional acoustic transducer that descends through the bottom of the sonobuoy canister to a shallow transmission depth of 75 feet. After completing shallow depth transmissions, the transducer automatically descends to the deep transmission depth of 350 feet. The messages are encoded through the EFS prior to launch. The acoustic transmission frequencies are classified. The message transmission includes an address group, an addressee group, and two word groups. The sonobuoy does not have an RF transmitter. The DLC Sonobuoy, upon self-activation, operates in an autonomous acoustic communications mode for the preset coding. The preset coding is converted into the equivalent acoustic frequencies and transmitted from the buoy transducer at both shallow and deep settings. This buoy does not use a VHF transmitter. Monitoring of acoustic transmissions can be accomplished through a co-located passive buoy.

g. Air Deployable Active Receiver Sonobuoy.

The ADAR Sonobuoy is an expendable unit capable of receiving UHF downlink commands and sending real-time beamformed acoustic data via a VHF digital uplink to the monitoring unit. The ADAR will be a free-floating, acoustic data receiver that will operate in conjunction with an acoustic source. The buoy will also scuttle automatically upon detection of a low voltage state or completion of its six-hour life. The ADAR Sonobuoy will be expended by all compatible ASW aircraft or OTS by shipboard personnel and operated in conjunction with an independent transmitting acoustic source. The EFS selector will be used to select depth (one of three) and the default acoustic beamform band (one of two). Once in the water the acoustic frequency band can be changed, the RF channel can be changed, and the RF can be turned on or off via downlink command function select. Once activated, the Sonobuoy receives, beamforms, and transmits real-time acoustic data

in the selected frequency band to the monitoring unit. The separately deployed acoustic source will be commanded to "ping," ensonifying the water and any target present, generating an acoustic "return" that is received and transmitted by the ADAR Receiver. Aboard the monitoring unit, the data will be processed and displayed (visual and aural), providing the operator a means of determining range, bearing, amplitude, and possibly Doppler (coherent acoustic sources only) on submarine targets.

h. Extended Echo Ranging Sonobuoy. The functional description of the EER Sonobuoy is classified.

i. Improved Extended Echo Ranging Sonobuoy. The functional description of the IEER Sonobuoy is classified.

2. Physical Description. The sonobuoys discussed in this NTSP are all A-size: length 36 inches, diameter 4 7/8 inches. The sonobuoy weight varies by manufacturer and buoy type, but will not exceed 39 pounds.

3. New Development Introduction. All the sonobuoys discussed in this NTSP, except the DLC Sonobuoy, are new production sonobuoys. The DLC Sonobuoy is a refurbished product. Initial Operating Capability for the ADAR Sonobuoy is scheduled for late FY01.

4. Significant Interfaces. The BT, DIFAR, LOFAR, DICASS, VLAD, and DLC Sonobuoys are used in conjunction with the on-board systems of the P-3, SH-2, and SH-60 series aircraft.

The EER, IEER, and ADAR Sonobuoys will operate with the P-3C Update III Aircraft. The SH-60B Upgrade, SH-2G Upgrade, and the SH-60F Upgrade are potential recipients of the EER, IEER, and ADAR Sonobuoys.

5. New Features, Configurations, or Material. Not Applicable (NA)

H. CONCEPTS

1. Operational Concept. All sonobuoys are expended from compatible ASW aircraft or deployed OTS by shipboard personnel. These sonobuoys are used to determine environmental conditions for determination of best search tactics, to communicate with friendly submarines, and to conduct search, localization, tracking, and, as required, attack of designated hostile platforms. Organizational personnel are used to preset and load the sonobuoys. These actions will use generic skills inherent in the Aviation Ordnanceman (AO), Aviation Warfare Systems Operator (AW), Aviation Electronics Technician (AT), and Sonar Technician ratings.

2. Maintenance Concept. All sonobuoys addressed in this NTSP are expendable and non-repairable.

a. Organizational. Organizational personnel will be used to preset and load the sonobuoys. These actions will use generic skills inherent in the AO, AW, AT, and Sonar Technician ratings.

b. Intermediate. NA

c. Depot. NA

d. Interim Maintenance. NA

e. Life-Cycle Maintenance Plan. The initial shelf life of all procured sonobuoys is five years. After five years, the shelf life may be extended, after inspection, in accordance with applicable shelf life program criteria.

3. Manning Concept. The qualitative and quantitative manpower requirements will remain unchanged at the recipient activity. Existing operators are used to monitor the processed data. Organizational level personnel upload and download the sonobuoy as part of their currently assigned tasking. Fleet introduction of the ADAR Sonobuoy will not drive a manpower increase or decrease.

4. Training Concept. The intent of the sonobuoy training program is to provide proficient fleet operators and sonobuoy handlers. Due to the expendable, non-repairable nature of the sonobuoys, training will be focused on the sonobuoy's employment, deployment, usage, preset, and loading procedures. There are no chargeable student billets associated with this NTSP. All sonobuoy training is or will be incorporated into operator training that is chargeable to the platform that the training supports.

a. Initial Training. All initial training required to support the DT, OT, and fleet introduction of the BT, DIFAR, LOFAR, DICASS, VLAD, DLC, EER, and IEER Sonobuoys has been completed. Initial training for ADAR DT was completed during first quarter FY97. Initial training for ADAR OT was completed during third quarter FY98.

b. Fleet Introduction Team. A Fleet Introduction Team (FIT) was established during DT to provide ADAR Sonobuoy training. The FIT will provide on-site familiarization in the form of instruction to the AWs and Tactical Coordinators (TACCO) on the capabilities, tactical applications, unique applications, equipment interface, and proper usage of the ADAR Sonobuoy. In addition, the FIT will demonstrate to AW, AT, AO, and Flight Engineer personnel the proper preset and loading procedures for the sonobuoy. Fleet introduction of the ADAR Sonobuoy is currently scheduled for late FY01. A FIT site visit schedule will not be developed until a firm delivery schedule has been established.

c. Follow-on Training

(1) Operator. Follow-on operator training currently exists for all sonobuoys addressed in this NTSP with the exception of the ADAR Sonobuoy. ADAR Sonobuoy information will be added to the following operator courses with no anticipated addition to current course lengths.

Title **Acoustics I**

CIN D/E-210-0002

Model Manager ... Fleet Aviation Specialized Operational Training Group, Atlantic (FASOTRAGRULANT) Norfolk, Virginia

Description This course provides Fleet operator acoustic training for VP/HS/HSL Sensor Operators and other Fleet acoustic operators. The student receives refresher training in acoustic theory, sound source identification, acoustic parameters, and signal interpretation. Upon completion the student will be able to perform as an Acoustic Operator in an operational environment.

Locations
 ° FASOTRAGRULANT Norfolk
 ° Fleet Aviation Specialized Operational Training Group, Pacific (FASOTRAGRUPAC) North Island, California
 ° FASOTRAGRULANT Detachment (DET) Brunswick, Maine
 ° FASOTRAGRULANT DET Jacksonville, Florida
 ° FASOTRAGRUPAC DET Whidbey Island, Washington
 ° FASOTRAGRUPAC DET Hawaii MCBH Kaneohe, Hawaii

Length 12 days

RFT date Currently available (second quarter FY01 with ADAR)

Skill identifier AW

TTE/TD Production sonobuoys will be used as Technical Training Equipment (TTE). Refer to element IV.A.1.

Prerequisites D-210-0001, Pipeline Basic Acoustic Analysis
 Secret security clearance

Title **Acoustics II**

CIN D/E-210-0003

Model Manager ... FASOTRAGRULANT Norfolk

Description This course provides Fleet operator advanced acoustic training including an update of current acoustic parameters and in-depth signal interpretation for VP, HS, and HSL Sensor Operators, prior to final designation. Upon completion, the student will be able to perform as an Advanced Acoustic Operator in an operational environment.

Locations ° FASOTRAGRULANT Norfolk
 ° FASOTRAGRUPAC North Island
 ° FASOTRAGRULANT DET Brunswick
 ° FASOTRAGRULANT DET Jacksonville
 ° FASOTRAGRUPAC DET Whidbey Island
 ° FASOTRAGRUPAC DET Hawaii MCBH Kaneohe

Length 12 days

RFT date Currently available (second quarter FY01 with ADAR)

Skill identifier AW

TTE/TD Production sonobuoys will be used as TTE. Refer to element IV.A.1.

Prerequisites D/E-210-0002, Acoustics I
 Secret security clearance

Title Acoustics II Refresher

CIN D/E-210-0005

Model Manager ... FASOTRAGRULANT Norfolk

Description This course provides Fleet operator advanced acoustic refresher training including an update of current acoustic parameters and in-depth signal interpretation for VP, HS, and HSL aircrewmembers. Upon completion, the student will be able to perform as an Advanced Acoustic Operator in an operational environment.

Locations ° FASOTRAGRULANT Norfolk
 ° FASOTRAGRUPAC North Island
 ° FASOTRAGRULANT DET Brunswick
 ° FASOTRAGRULANT DET Jacksonville
 ° FASOTRAGRUPAC DET Whidbey Island
 ° FASOTRAGRUPAC DET Hawaii MCBH Kaneohe

Length 5 days

RFT date Currently available (second quarter FY01 with ADAR)

Skill identifier AW

TTE/TD Production sonobuoys will be used as TTE. Refer to element IV.A.1.

Prerequisites D/E-210-0003, Acoustics II
 Secret security clearance

Title **Antisubmarine Warfare Aural Recognition**
CIN D/E-210-0006
Model Manager ... FASOTRAGRUPAC North Island
Description This course provides officer and enlisted personnel with the basic fundamentals of aural recognition techniques, aural cues, and target and non-target recognition as applicable to Anti-Submarine Warfare. Upon completion, the student will be able to perform as an Acoustic Operator in an operational environment.
Locations ° FASOTRAGRULANT Norfolk
° FASOTRAGRUPAC North Island
° FASOTRAGRULANT DET Brunswick
° FASOTRAGRULANT DET Jacksonville
° FASOTRAGRUPAC DET Whidbey Island
° FASOTRAGRUPAC DET Hawaii MCBH Kaneohe
Length 2 days
RFT date Currently available (second quarter FY01 with ADAR)
Skill identifier TACCO, AW
TTE/TD Production sonobuoys will be used as TTE. Refer to element IV.A.1.
Prerequisite Secret security clearance

(2) Maintenance. NA

d. Student Profiles

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
TACCO	° Q-2D-0012, Basic Naval Flight Officer Training
AW	° C-210-2010, Aviation Warfare Systems Operator Class A1 ° Q-050-1500, Naval Aircrew Candidate School

e. Training Pipelines. The training tracks listed in Follow-on Training above will be modified to include the ADAR Sonobuoy with no change to course length anticipated.

I. ONBOARD (IN-SERVICE) TRAINING

1. Proficiency or Other Training Organic to the New Development

- a. **Maintenance Training Improvement Program.** NA
- b. **Aviation Maintenance In-Service Training.** NA
- c. **Aviation Maintenance Training Continuum System.** NA

2. Personnel Qualification Standards. Personnel Qualification Standards (PQS) will be updated to reflect the introduction of the ADAR Sonobuoy through PQS user inputs and PQS review conferences facilitated by Chief of Naval Education and Training (CNET). A firm date has not been established for the ADAR Sonobuoy PQS review. The following PQSs will require updating with ADAR Sonobuoy information:

PQS TITLE	PQS NUMBER	MODEL MANAGER
Explosive Ordnance Disposal (EOD) Fundamentals	43171-C	EOD Training Unit Two
P-3 Update III Aircraft Acoustic Sensor Operator	43433-16B	Patrol Squadron Three Zero
P-3 C/C (U) Aircraft Tactical Coordinator	43433-21B	Patrol Squadron Three Zero

3. Other Onboard or In-Service Training Packages. Sonobuoys may be deployed utilizing CADs common to the standard A-size sonobuoys. Therefore, sonobuoy CAD training for EOD personnel is relevant.

J. LOGISTICS SUPPORT

1. Manufacturer and Contract Numbers. Sonobuoys are currently supplied under various contracts managed by NAVAIRSYSCOM, PMA264. Contracts to replenish expended sonobuoys are executed annually or semi-annually. Contract numbers for individual sonobuoy procurements are available from PMA264.

SONOBUOY	MANUFACTURER	ADDRESS
BT	Sparton Electronics	DeLeon Springs, Florida
BT	Hermes Electronics	Dartmouth, Nova Scotia, Canada
DIFAR	Under Sea Sensor Systems, Inc.	Fort Wayne, Indiana

SONOBUOY	MANUFACTURER	ADDRESS
DIFAR	Sparton Electronics	DeLeon Springs, Florida
DIFAR	Hermes Electronics	Dartmouth, Nova Scotia, Canada
LOFAR	Under Sea Sensor Systems, Inc.	Fort Wayne, Indiana
LOFAR	Sparton Electronics	DeLeon Springs, Florida
DICASS	Under Sea Sensor Systems, Inc.	Fort Wayne, Indiana
DICASS	Sparton Electronics	DeLeon Springs, Florida
VLAD	Under Sea Sensor Systems, Inc.	Ft. Wayne, Indiana
VLAD	Sparton Electronics	DeLeon Springs, Florida
VLAD	Hermes Electronics	Dartmouth, Nova Scotia, Canada
DLC	Sparton Electronics	DeLeon Springs, Florida
ADAR	ERAPSCO	San Diego, California
EER	Under Sea Sensor Systems, Inc.	Fort Wayne, Indiana
EER	Sparton Electronics	DeLeon Springs, Florida
IEER	Under Sea Sensor Systems, Inc.	Fort Wayne, Indiana
IEER	Sparton Electronics	DeLeon Springs, Florida

Note: The command buoy portion of the EER and IEER Sonobuoys is manufactured by the contractor and then sent to the Naval Weapons Station Yorktown, Virginia, where the payload is added and the assembly completed.

2. Program Documentation. The Naval Surface Warfare Center (NSWC) Crane, Indiana, will update the Sonobuoy Maintenance Plan, MP-AYMP-1119, dated October 1993, with ADAR information prior to the Initial Operational Capability date, currently scheduled for late FY01. The Integrated Logistics Support Plan (ILSP) for Air Deployable Active Receiver Sonobuoys, S-B-ILSP-427, dated May 1995 is current.

3. Technical Data Plan. The technical manuals listed in Part IV.B.3 of this NTSP will be updated to include ADAR Sonobuoy information. No new technical manuals will be required to support the ADAR Sonobuoy.

4. Test Sets, Tools, and Test Equipment. The subject sonobuoys will not require special tools or test equipment for organic Navy support. Only common support equipment will be required for transportation, uploading, and downloading of the sonobuoys.

5. Repair Parts. The subject sonobuoys are expendable and non-repairable; therefore, there are no requirements for repair parts.

6. Human Systems Integration. NA

K. SCHEDULES

1. Installation and Delivery Schedules. Sonobuoys are installed when and as required to support the operating activities' missions. The delivery schedules for all subject sonobuoys are classified. Persons with the need to know may obtain delivery schedule information from NAVAIRSYSCOM, PMA264.

2. Ready For Operational Use Schedule. Sonobuoys will be ready for use upon delivery.

3. Time Required to Install at Operational Sites. Sonobuoys are loaded into aircraft at the rate of approximately 30 sonobuoys per hour.

4. Foreign Military Sales and Other Source Delivery Schedule. Information concerning delivery schedules for foreign military sales of sonobuoys is classified information. Persons with the need to know may obtain this information from NAVAIRSYSCOM, PMA264.

5. Training Device and Technical Training Equipment Delivery Schedule. No Training Devices (TD) are required to support sonobuoy training. Production sonobuoys are used as TTE. One of each type BT, DIFAR, LOFAR, DICASS, VLAD, DLC, EER, and IEER Sonobuoy is in place for each course at each course location. Two ADAR Sonobuoys will be delivered for each course at each course location no later than the end of second quarter FY01.

L. GOVERNMENT FURNISHED EQUIPMENT AND CONTRACTOR FURNISHED EQUIPMENT TRAINING REQUIREMENTS. NA

M. RELATED NTSPs AND OTHER APPLICABLE DOCUMENTS

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
SH-60B LAMPS MK III Part B, Aircraft Subsystem NTSP	A-50-7702D/A	PMA299	Approved Nov 94

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
SH-60F Carrier Inner Zone ASW Helicopter NTSP	A-50-8508D/D	PMA299	Proposed May 00
P-3C Series Aircraft NTSP	A-50-8112C/D	PMA290	Draft Dec 99
S-3B Aircraft NTSP	A-50-8310D/D	PMA244	Draft May 00
SH-2G Helicopter NTSP	A-50-9303/A	PMA299	Approved Jun 94
Sonobuoy Interactive Electronic Technical Manual	AE-325CD-SSQ-000	PMA264	Approved 1 Sep 97
Sonobuoy Maintenance Plan	MP-AYMP-1119	NSWC Crane	Approved Oct 93
ILSP for the Deployable Active Receiver Sonobuoy	S-B-ILSP-427	NSWC Crane	Approved May 95

PART II - BILLET AND PERSONNEL REQUIREMENTS

The following elements are not affected by the Navy Consolidated Sonobuoys and, therefore, are not included in Part II of this NTSP:

II.A. Billet Requirements

II.A.1.a. Operational and Fleet Support Activity Activation Schedule

II.A.1.b. Billets Required for Operational and Fleet Support Activities

II.A.1.c. Total Billets Required for Operational and Fleet Support Activities

II.A.2.a. Operational and Fleet Support Activity Deactivation Schedule

II.A.2.b. Billets to be Deleted in Operational and Fleet Support Activities

II.A.2.c. Total Billets to be Deleted in Operational and Fleet Support Activities

II.A.3. Training Activities Instructor and Support Billet Requirements

II.A.4. Chargeable Student Billet Requirements

II.A.5. Annual Incremental and Cumulative Billets

II.B. Personnel Requirements

II.B.1. Annual Training Input Requirements

Note: All sonobuoy delivery schedules are classified. There are no changes in manpower or training requirements. There are no chargeable student billets.

PART III - TRAINING REQUIREMENTS

The following elements are not affected by the Navy Consolidated Sonobuoys and, therefore, are not included in Part III of this NTSP:

III.A.1. Initial Training Requirements

III.A.2. Follow-on Training

III.A.2.a. Existing Courses

III.A.2.b. Planned Courses

III.A.2.c. Unique Courses

III.A.3. Existing Training Phased Out

Note: All initial training required to support the sonobuoys addressed in this NTSP has been completed. Follow-on training for sonobuoys is incorporated into courses that are chargeable to the platform that the training supports.

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

The following elements are not affected by the Navy Consolidated Sonobuoys and, therefore, are not included in Part IV of this NTSP:

IV.A. Training Hardware

IV.A.2. Training Devices

IV.B.1 Training Services

IV.C. Facility Requirements

IV.C.1 Facility Requirements Summary (Space/Support) by Activity

IV.C.2. Facility Requirements Detailed by Activity and Course

IV.C.3. Facility Project Summary by Program

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

IV.A. TRAINING HARDWARE

IV.A.1. TTE / GPTE / SPTE / ST / GPETE / SPETE

CIN, COURSE TITLE: D/E-210-0002, Acoustics I
TRAINING ACTIVITY,
LOCATION, UIC: FASOTRAGRULANT, Norfolk, 30686
 FASOTRAGRUPAC, North Island, 09191
 FASOTRAGRULANT DET, Brunswick, 44408
 FASOTRAGRULANT DET, Jacksonville, 43520
 FASOTRAGRUPAC DET, Whidbey Island, 0345A
 FASOTRAGRUPAC DET, Hawaii MCBH Kaneohe, 0346A

ITEM NUMBER	EQUIPMENT	QTY REQUIRED	DATE REQUIRED	STATUS
TTE 001	AN/SSQ-36 BT Sonobuoy Onboard	1		
002	AN/SSQ-53D DIFAR Sonobuoy	1		Onboard
003	AN/SSQ-53E DIFAR Sonobuoy	1		Onboard
004	AN/SSQ-57B LOFAR Sonobuoy Onboard	1		
005	AN/SSQ-62B DICAS Sonobuoy	1		Onboard
006	AN/SSQ-62C DICAS Sonobuoy	1		Onboard
007	AN/SSQ-62D DICAS Sonobuoy	1		Onboard
008	AN/SSQ-62E DICAS Sonobuoy	1		Onboard
009	AN/SSQ-77B VLAD Sonobuoy	1		Onboard
010	AN/SSQ-86B DLC Sonobuoy	1		Onboard
011	AN/SSQ-62B ADAR Sonobuoy	1	1 st Qtr FY01	Pending
012	AN/SSQ-110 EER Sonobuoy	1		Onboard
013	AN/SSQ-110/A EER Sonobuoy	1		Onboard

CIN, COURSE TITLE: D/E-210-0003, Acoustics II
TRAINING ACTIVITY,
LOCATION, UIC: FASOTRAGRULANT, Norfolk, 30686
 FASOTRAGRUPAC, North Island, 09191
 FASOTRAGRULANT DET, Brunswick, 44408
 FASOTRAGRULANT DET, Jacksonville, 43520
 FASOTRAGRUPAC DET, Whidbey Island, 0345A
 FASOTRAGRUPAC DET, Hawaii MCBH Kaneohe, 0346A

ITEM NUMBER	EQUIPMENT	QTY REQUIRED	DATE REQUIRED	STATUS
TTE 001	AN/SSQ-36 BT Sonobuoy Onboard	1		
002	AN/SSQ-53D DIFAR Sonobuoy	1		Onboard
003	AN/SSQ-53E DIFAR Sonobuoy	1		Onboard
004	AN/SSQ-57B LOFAR Sonobuoy Onboard	1		

005	AN/SSQ-62B DICAS Sonobuoy	1		Onboard
006	AN/SSQ-62C DICAS Sonobuoy	1		Onboard
007	AN/SSQ-62D DICAS Sonobuoy	1		Onboard
008	AN/SSQ-62E DICAS Sonobuoy	1		Onboard
009	AN/SSQ-77B VLAD Sonobuoy	1		Onboard

IV.A.1. TTE / GPTE / SPTE / ST / GPETE / SPETE

010	AN/SSQ-86B DLC Sonobuoy	1		Onboard
011	AN/SSQ-62B ADAR Sonobuoy	1	1 st Qtr FY01	Pending
012	AN/SSQ-110 EER Sonobuoy	1		Onboard
013	AN/SSQ-110/A EER Sonobuoy	1		Onboard

CIN, COURSE TITLE: D/E-210-0005, Acoustics II Refresher
TRAINING ACTIVITY,
LOCATION, UIC: FASOTRAGRULANT, Norfolk, 30686
FASOTRAGRUPAC, North Island, 09191
FASOTRAGRULANT DET, Brunswick, 44408
FASOTRAGRULANT DET, Jacksonville, 43520
FASOTRAGRUPAC DET, Whidbey Island, 0345A
FASOTRAGRUPAC DET, Hawaii MCBH Kaneohe, 0346A

ITEM NUMBER	EQUIPMENT	QTY REQUIRED	DATE REQUIRED	STATUS
TTE				
001	AN/SSQ-36 BT Sonobuoy Onboard	1		
002	AN/SSQ-53D DIFAR Sonobuoy	1		Onboard
003	AN/SSQ-53E DIFAR Sonobuoy	1		Onboard
004	AN/SSQ-57B LOFAR Sonobuoy Onboard	1		
005	AN/SSQ-62B DICAS Sonobuoy	1		Onboard
006	AN/SSQ-62C DICAS Sonobuoy	1		Onboard
007	AN/SSQ-62D DICAS Sonobuoy	1		Onboard
008	AN/SSQ-62E DICAS Sonobuoy	1		Onboard
009	AN/SSQ-77B VLAD Sonobuoy	1		Onboard
010	AN/SSQ-86B DLC Sonobuoy	1		Onboard
011	AN/SSQ-62B ADAR Sonobuoy	1	1 st Qtr FY01	Pending
012	AN/SSQ-110 EER Sonobuoy	1		Onboard
013	AN/SSQ-110/A EER Sonobuoy	1		Onboard

CIN, COURSE TITLE: D/E-210-0006, Antisubmarine Warfare Aural Recognition
TRAINING ACTIVITY,
LOCATION, UIC: FASOTRAGRULANT, Norfolk, 30686
FASOTRAGRUPAC, North Island, 09191
FASOTRAGRULANT DET, Brunswick, 44408
FASOTRAGRULANT DET, Jacksonville, 43520
FASOTRAGRUPAC DET, Whidbey Island, 0345A
FASOTRAGRUPAC DET, Hawaii MCBH Kaneohe, 0346A

ITEM NUMBER	EQUIPMENT	QTY REQUIRED	DATE REQUIRED	STATUS
TTE				

001	AN/SSQ-36 BT Sonobuoy		1	
	Onboard			
002	AN/SSQ-53D DIFAR Sonobuoy	1		Onboard
003	AN/SSQ-53E DIFAR Sonobuoy	1		Onboard
004	AN/SSQ-57B LOFAR Sonobuoy		1	
	Onboard			
005	AN/SSQ-62B DICAS Sonobuoy	1		Onboard
006	AN/SSQ-62C DICAS Sonobuoy	1		Onboard
007	AN/SSQ-62D DICAS Sonobuoy	1		Onboard
008	AN/SSQ-62E DICAS Sonobuoy	1		Onboard

IV.A.1. TTE / GPTE / SPTE / ST / GPETE / SPETE

009	AN/SSQ-77B VLAD Sonobuoy	1		Onboard
010	AN/SSQ-86B DLC Sonobuoy	1		Onboard
011	AN/SSQ-62B ADAR Sonobuoy	1	1 st Qtr FY01	Pending
012	AN/SSQ-110 EER Sonobuoy	1		Onboard
013	AN/SSQ-110/A EER Sonobuoy	1		Onboard

IV.B.2. CURRICULA MATERIALS AND TRAINING AIDS

Note: Curricula Materials will be updated to include ADAR Sonobuoy information and delivered to the following training sites prior to the RFT date for the ADAR Sonobuoy, currently scheduled for second quarter FY01.

CIN, COURSE TITLE: D/E-210-0002, Acoustics I
TRAINING ACTIVITY,
LOCATION, UIC: FASOTRAGRULANT, Norfolk, 30686
 FASOTRAGRUPAC, North Island, 09191
 FASOTRAGRULANT DET, Brunswick, 44408
 FASOTRAGRULANT DET, Jacksonville, 43520
 FASOTRAGRUPAC DET, Whidbey Island, 0345A
 FASOTRAGRUPAC DET, Hawaii MCBH Kaneohe, 0346A

TYPES OF MATERIAL OR AID	QTY REQUIRED	DATE REQUIRED	STATUS
Wall Chart	1 Set		Onboard
Transparencies	1 Set		Onboard
Student Guides	50		Onboard
Instructor Guides	3		Onboard
Student Tests	50		Onboard

CIN, COURSE TITLE: D/E-210-0003, Acoustics II
TRAINING ACTIVITY,
LOCATION, UIC: FASOTRAGRULANT, Norfolk, 30686
 FASOTRAGRUPAC, North Island, 09191
 FASOTRAGRULANT DET, Brunswick, 44408
 FASOTRAGRULANT DET, Jacksonville, 43520
 FASOTRAGRUPAC DET, Whidbey Island, 0345A
 FASOTRAGRUPAC DET, Hawaii MCBH Kaneohe, 0346A

TYPES OF MATERIAL OR AID	QTY REQUIRED	DATE REQUIRED	STATUS
Wall Chart	1 Set		Onboard
Transparencies	1 Set		Onboard
Student Guides	50		Onboard
Instructor Guides	3		Onboard
Student Tests	50		Onboard

CIN, COURSE TITLE: D/E-210-0005, Acoustics II Refresher
TRAINING ACTIVITY,
LOCATION, UIC: FASOTRAGRULANT, Norfolk, 30686
 FASOTRAGRUPAC, North Island, 09191
 FASOTRAGRULANT DET, Brunswick, 44408
 FASOTRAGRULANT DET, Jacksonville, 43520
 FASOTRAGRUPAC DET, Whidbey Island, 0345A
 FASOTRAGRUPAC DET, Hawaii MCBH Kaneohe, 0346A

TYPES OF MATERIAL OR AID	QTY REQUIRED	DATE REQUIRED	STATUS
Wall Chart	1 Set		Onboard
Transparencies	1 Set		Onboard
Student Guides	25		Onboard
Instructor Guides	2		Onboard
Student Tests	25		Onboard

IV.B.2. CURRICULA MATERIALS AND TRAINING AIDS

CIN, COURSE TITLE: D/E-210-0006, Antisubmarine Warfare Aural Recognition

TRAINING ACTIVITY,

LOCATION, UIC: FASOTRAGRULANT, Norfolk, 30686
FASOTRAGRUPAC, North Island, 09191
FASOTRAGRULANT DET, Brunswick, 44408
FASOTRAGRULANT DET, Jacksonville, 43520
FASOTRAGRUPAC DET, Whidbey Island, 0345A
FASOTRAGRUPAC DET, Hawaii MCBH Kaneohe, 0346A

TYPES OF MATERIAL OR AID	QTY REQUIRED	DATE REQUIRED	STATUS
Student Guides	20		Onboard
Instructor Guides	3		Onboard
Student Tests	20		Onboard

IV.B.3. TECHNICAL MANUALS

Note: Technical manuals will be updated to include ADAR Sonobuoy information and delivered to the following training sites prior to the RFT date for the ADAR Sonobuoy, currently scheduled for second quarter FY01.

CIN, COURSE TITLE: D/E-210-0002, Acoustics I
TRAINING ACTIVITY,
LOCATION, UIC: FASOTRAGRULANT, Norfolk, 30686
 FASOTRAGRUPAC, North Island, 09191
 FASOTRAGRULANT DET, Brunswick, 44408
 FASOTRAGRULANT DET, Jacksonville, 43520
 FASOTRAGRUPAC DET, Whidbey Island, 0345A
 FASOTRAGRUPAC DET, Hawaii MCBH Kaneohe, 0346A

TECHNICAL MANUAL TITLE, NUMBER	MEDIUM	QUANT REQD	DATE REQD	STATUS
Sonobuoy Instruction Manual NAVAIR 28-SSQ-500-1	CD-ROM	2		Onboard
Basic Introduction to Air ASW Sensors NAVAIR 28-SSQ-500-4	CD-ROM	1		Onboard
Basic Introduction to Air ASW Sensors (Confidential Supplement) NAVAIR 28-SSQ-500-4A	CD-ROM	1		Onboard
P-3 TACMAN NWP 3-20.5	Hard copy	2		Onboard

CIN, COURSE TITLE: D/E-210-0003, Acoustics II
TRAINING ACTIVITY,
LOCATION, UIC: FASOTRAGRULANT, Norfolk, 30686
 FASOTRAGRUPAC, North Island, 09191
 FASOTRAGRULANT DET, Brunswick, 44408
 FASOTRAGRULANT DET, Jacksonville, 43520
 FASOTRAGRUPAC DET, Whidbey Island, 0345A
 FASOTRAGRUPAC DET, Hawaii MCBH Kaneohe, 0346A

TECHNICAL MANUAL TITLE, NUMBER	MEDIUM	QUANT REQD	DATE REQD	STATUS
Sonobuoy Instruction Manual NAVAIR 28-SSQ-500-1	CD-ROM	2		Onboard
Basic Introduction to Air ASW Sensors NAVAIR 28-SSQ-500-4	CD-ROM	1		Onboard
Basic Introduction to Air ASW Sensors (Confidential Supplement) NAVAIR 28-SSQ-500-4A	CD-ROM	1		Onboard
P-3 TACMAN	Hard copy	2		Onboard

IV.B.3. TECHNICAL MANUALS

NWP 3-20.5

CIN, COURSE TITLE: D/E-210-0005, Acoustics II Refresher
TRAINING ACTIVITY,
LOCATION, UIC: FASOTRAGRULANT, Norfolk, 30686
 FASOTRAGRUPAC, North Island, 09191
 FASOTRAGRULANT DET, Brunswick, 44408
 FASOTRAGRULANT DET, Jacksonville, 43520
 FASOTRAGRUPAC DET, Whidbey Island, 0345A
 FASOTRAGRUPAC DET, Hawaii MCBH Kaneohe, 0346A

TECHNICAL MANUAL TITLE, NUMBER	MEDIUM	QUANT REQD	DATE REQD	STATUS
Sonobuoy Instruction Manual NAVAIR 28-SSQ-500-1	CD-ROM	2		Onboard
Basic Introduction to Air ASW Sensors NAVAIR 28-SSQ-500-4	CD-ROM	1		Onboard
Basic Introduction to Air ASW Sensors (Confidential Supplement) NAVAIR 28-SSQ-500-4A	CD-ROM	1		Onboard
P-3 TACMAN NWP 3-20.5	Hard copy	2		Onboard

CIN, COURSE TITLE: D/E-210-0006, Antisubmarine Warfare Aural Recognition
TRAINING ACTIVITY,
LOCATION, UIC: FASOTRAGRULANT, Norfolk, 30686
 FASOTRAGRUPAC, North Island, 09191
 FASOTRAGRULANT DET, Brunswick, 44408
 FASOTRAGRULANT DET, Jacksonville, 43520
 FASOTRAGRUPAC DET, Whidbey Island, 0345A
 FASOTRAGRUPAC DET, Hawaii MCBH Kaneohe, 0346A

TECHNICAL MANUAL TITLE, NUMBER	MEDIUM	QUANT REQD	DATE REQD	STATUS
Sonobuoy Instruction Manual NAVAIR 28-SSQ-500-1	CD-ROM	2		Onboard
Basic Introduction to Air ASW Sensors NAVAIR 28-SSQ-500-4	CD-ROM	1		Onboard
Basic Introduction to Air ASW Sensors (Confidential Supplement) NAVAIR 28-SSQ-500-4A	CD-ROM	1		Onboard
P-3 TACMAN NWP 3-20.5	Hard copy	2		Onboard

PART V - MPT MILESTONES

COG CODE	MPT MILESTONES	DATE	STATUS
TSA	Developed Draft Consolidated Sonobuoy NTSP	Dec 93	Completed
TSA	Began analysis of manpower personnel, and training requirements	Oct 95	Completed
TSA	Promulgated update Draft NTP to ALCON for review	Jun 96	Completed
TSA	Developed Draft NTSP (Update)	Feb 97	Completed
DA	Completed ADAR DT Initial Training	Oct 97	Completed
DA	Began ADAR DT-II	Oct 97	Completed
DA	Submitted Proposed NTSP to OPNAV	Jul 98	Completed
OPO	Approved Consolidated Sonobuoy NTSP	Sep 98	Completed
DA	Completed ADAR DT-II	Sep 98	Completed
DA	Completed ADAR OT Initial Training	Oct 98	Completed
DA	Began ADAR OT-II	Oct 98	Completed
DA	Completed ADAR OT-II	Dec 98	Completed
OPO	Approved start of ADAR Milestone III	Mar 99	Completed
TSA	Developed Draft NTSP with ADAR included	Oct 99	Completed
TSA	Developed Proposed NTSP	May 00	Completed
TSA	Deliver curricula material updated with ADAR information	FY01	Pending
TSA	Deliver technical manuals updated with ADAR information	FY01	Pending
TSA	Begin Follow-on Training for ADAR	FY01	Pending
DA	Achieve Initial Operational Capability for ADAR	FY01	Pending

PART VI - DECISION ITEMS/ACTION REQUIRED

DECISION ITEM OR
ACTION REQUIRED

COMMAND ACTION

DUE DATE

STATUS

None

PART VII - POINTS OF CONTACT

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL	TELEPHONE NUMBERS
CAPT Owen Fletcher Deputy Head, Plans, Policy, and Fleet Maintenance Support CNO, N881B fletcher.owen@hq.navy.mil	COMM: (703) 604-7747 DSN: 664-7747 FAX: (703) 604-6972
CDR Cyrus Murphy Resource Sponsor / Program Sponsor CNO, N885D1 murphy.cyrus@hq.navy.mil	COMM: (703) 697-9359 DSN: 227-9359 FAX: (703) 695-7103
CAPT Thomas Vandenberg Head, Aviation Technical Training Branch CNO, N889H vandenberg.thomas@hq.navy.mil	COMM: (703) 604-7730 DSN: 664-7730 FAX: (703) 604-6939
LCDR Mike Belcher NTSP Manager CNO, N889H1 belcher.michael@hq.navy.mil	COMM: (703) 604-7765 DSN: 664-7765 FAX: (703) 604-6939
MGYSGT Ken Gravatt NTSP Manager CNO, N889H6 gravatt.kenneth.hq.navy.mil	COMM: (703) 604-7722 DSN: 664-7722 FAX: (703) 604-6939
CDR Kevin Neary Aviation Manpower CNO, N122C1 n122c1@bupers.navy.mil	COMM: (703) 695-3247 DSN: 225-3247 FAX: (703) 614-5308
Mr. Robert Zweibel Training Technology Policy CNO, N75K zweibel.robert@hq.navy.mil	COMM: (703) 614-1344 DSN: 224-1344 FAX: (703) 695-5698
CDR Jack Vess Sonobuoy Deputy Program Manager PEO(A), PMA264B vessje.jfk@navair.navy.mil	COMM: (301) 757-5718 DSN: 757-5718 FAX: (301) 757-5751
CDR David Falk Air ASW Deputy Program Manager PEO(A), PMA264C falkdc@navair.navy.mil	COMM: (301) 757-5736 DSN: 757-5736 FAX: (301) 757-5751
AWCM Mike Kneip Fleet Liaison and Training PEO(A), PMA264B3 kneipmt@navair.navy.mil	COMM: (301) 757-5716 DSN: 757-5716 FAX: (301) 757-5751

PART VII - POINTS OF CONTACT

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL	TELEPHONE NUMBERS
AWCM Tim Weinzettl Fleet Support NAVAIRSYSCOM, PMA264 weinzettlg@navair.navy.mil	COMM: (301) 757-5729 DSN: 757-5729 FAX: (301) 757-5751
CDR James Hoke P-3 Training System Deputy Program Manager NAVAIRSYSCOM, PMA2052F hokejb@navair.navy.mil	COMM: (301) 757-8147 DSN: 757-8147 FAX: (301) 757-6945
Mr. William Lee DAPMTS NAVAIRSYSCOM, PMA2052F1 leewd@navair.navy.mil	COMM: (301) 757-8146 DSN: 757-8146 FAX: (301) 757-6945
Mr. George Wolf Assistant Program Manager, Logistics NSWC Crane 7054 wolf_gw@crane.navy.mil	COMM: (812) 854-6730 DSN: 482-6730 FAX: (812) 854-3573
CDR Robin Mason Aviation NTSP Point of Contact CINCLANTFLT, N-721 masonrf@clf.navy.mil	COMM: (757) 836-0101 DSN: 836-0101 FAX: (757) 836-0141
Mr. Bob Long Deputy Director for Training CINCPACFLT, N70 u70@cpf.navy.mil	COMM: (808) 471-8513 DSN: 315-471-8513 FAX: (808) 471-8596
YN1 Richard Simonton Selected Reservist Quota Control COMNAVAIRESFOR, N-333 simonton@cnrf.nola.navy.mil	COMM: (504) 678-1445 DSN: 678-1445 FAX: (504) 678-5064
AVCM Robert Claire PQS Development Group LCPO NETPDC avcm-robert.claire@smtp.cnet.navy.mil	COMM: (850) 452-1708 DSN: 922-1708 FAX: (850) 452-1764
CAPT Patricia Huiatt Deputy Assistant, Chief of Naval Personnel for Distribution NAVPERSCOM, PERS-4B p4b@persnet.navy.mil	COMM: (901) 874-3529 DSN: 882-3529 FAX: (901) 874-2606
CDR Timothy Ferree Branch Head, Aviation Enlisted Assignments NAVPERSCOM, PERS-404 p404@persnet.navy.mil	COMM: (901) 874-3691 DSN: 882-3691 FAX: (901) 874-2642

PART VII - POINTS OF CONTACT

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL	TELEPHONE NUMBERS
CDR Scott Gingery Aviation Department Head NAVMAC, 30 scott.gingery@navmac.navy.mil	COMM: (901) 874-6218 DSN: 882-6218 FAX: (901) 874-6471
Mr. Al Sargent NTSP Coordinator NAVMAC, 33 al.sargent@navmac.navy.mil	COMM: (901) 874-6247 DSN: 882-6247 FAX: (901) 874-6471
Mr. Steve Berk CNET NTSP Distribution CNET ETS-23 stephen.berk@smtp.cnet.navy.mil	COMM: (850) 452-8919 DSN: 922-8919 FAX: (850) 452-4853
CDR Erich Blunt Aviation Technical Training CNET, ETE-32 cdr-erich.blunt@smtp.cnet.navy.mil	COMM: (850) 452-4915 DSN: 922-4915 FAX: (850) 452-4901
AVCM Thomas King Training Coordinator NAMTRAGRU HQ, N2213 avcm-thomas.e.king@smtp.cnet.navy.mil	COMM: (850) 452-9712 ext. 249 DSN: 922-9712 ext. 249 FAX: (850) 452-9965
Mr. John Gerlitz NTSP Coordinator COMOPTEVFOR, 50 gerlitzj@cotf.navy.mil	COMM: (757) 444-5546 ext. 3295 DSN: 564-5546 ext. 3295 FAX: (757) 444-3820
Mr. Jack Savage Fleet Support NAWCAD Patuxent River savageje@navair.navy.mil	COMM: (301)342-2106 DSN: 342-2106 FAX: (301) 342-2518
AWCS William Rainwater PQS Development NETPMSA awcs.william.rainwater@smtp.cnet.navy.mil	COMM: (850) 452-1035 DSN: 922-1035 FAX: (850) 452-1764
LT Mark Felice ADAR OT Director VX-1 felicema@navair.navy.mil	COMM: (301) 757-1569 DSN: 757-1569 FAX: (301) 757-1326
LT Albert Marblestone Fleet Training Coordinator VP-30 vp30-1@pop.uar.navy.smil.mil	COMM: (904) 542-4134 DSN: 942-4134 FAX: (904) 542-3158

PART VII - POINTS OF CONTACT

NAME / FUNCTION / ACTIVITY, CODE / INTERNET EMAIL

TELEPHONE NUMBERS

Mr. Phil Szczyglowski

Competency Manager
NAVAIRSYSCOM, AIR 3.4.1.1
szczyglowspr@navair.navy.mil

COMM: (301) 757-9182

DSN: 757-9182

FAX: (301) 342-4723

Mr. Bob Kresge

NTSP Manager
NAVAIRSYSCOM, AIR 3.4.1.1
kresgerj@navair.navy.mil

COMM: (301) 757-9174

DSN: 757-9174

FAX: (301) 342-4723

ATCS David Morris

NTSP Coordinator
NAVAIRSYSCOM, AIR 3.4.1.1
morrism@navair.navy.mil

COMM: (301) 757-9173

DSN: 757-9173

FAX: (301) 342-4723

ATC Aubrey Taylor

MPT Analyst
NAVAIRSYSCOM, AIR 3.4.1.1
tayloral@navair.navy.mil

COMM: (301) 757-9194

DSN: 757-9194

FAX: (301) 342-4723